Benign Skin Tumors in Dogs

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Tumors of the skin and subcutis (the tissues just under the skin) are the most common form of cancer found in the dog. In fact, these tumors account for 30-40% of all tumors found in the dog.
This article will focus on the skin tumors found in dogs that are benign.

What are some common benign skin tumors found on dogs?

Basal Cell Tumor
Basal cells tumors originate from basal cells found in the skin and are fairly common in older dogs. Basal cell tumors occur commonly as solitary nodules that can be broad-based or stalked. These tumors are typically found on the head, neck and shoulder of the dog and oftentimes are pigmented. Because of this pigmentation, basal cell tumors can be mistaken for a melanoma. Accurate diagnosis requires a microscopic examination of biopsied tissues from the tumor. Wide surgical removal is the treatment of choice. Radiation and/or chemotherapy may be needed. Cocker Spaniels and Poodles appear to be at greatest risk.

Ceruminous Gland Adenoma
Ceruminous gland adenomas originate from the cells of the ceruminous (earwax) glands in the ear canal anal. These tumors are typically small stalked masses that are brown in color and located close to the ear drum. The symptoms of these tumors can resemble chronic ear infections. Diagnosis involves identifying the tumor's cells microscopically. Treatment involves complete ear canal resection with the possibility of radiation and chemotherapy.

Cutaneous Hemangioma
Cutaneous hemangiomas are benign growths that originate from endothelial cells (cells found in blood vessels) located in the skin and/or subcutaneous tissues. Subcutaneous hemangiomas are generally larger than skin hemangiomas. In addition, subcutaneous hemangiomas are typically elevated, partially hairless and blue in color. Skin hemangiomas appear as a small dome with a reddish-black tint. These tumors may be caused by certain chemicals, the sun or be idiopathic (cause unknown) in origin. They affect mainly middle-aged to older dogs with no preference to males or females. Many different breeds are affected. Diagnosis of the cutaneous hemangioma involves skin biopsy, electromicroscopy and immunohistochemistry (a process used to detect certain antigens within a sample of tissue). Treatments include surgical removal, cryosurgery (freezing) and electrosurgery.

Cutaneous Histiocytoma
The canine cutaneous histiocytoma is a benign skin tumor of young dogs (1-3 years). They originate from the white blood cells known as monocytes and macrophages found in the dog's skin. These tumors are typically found on the head and neck of the dog. They are round, hairless, pink-red lesions that sometimes ulcerate. Because of their outward appearance, they are often referred to as "button tumors." Canine histiocytomas usually regress within 4-8 weeks following their onset. Surgical removal may be needed if the tumor does not regress.

Cysts
Cysts are non-cancerous, sac-like structures with a lining of epithelial cells. There are several different types of cysts depending on the kind of cells lining the structure. The cyst's location also aids in its identification. Treatment generally involves surgical removal or observation without therapy.

- Follicular Cyst
- Infundibular Cyst (also known as a Sebaceous Cyst)
- Isthmus-Catagen Cyst
- Matrical Cyst
- Hybrid Cyst
- Apocrine Sweat Gland Cyst

Terms Related to this Discussion:

Cancer - A general term frequently used to describe any of various types of malignant neoplasms, most of which invade surrounding tissues, may metastasize (see below) to several sites, and are likely to recur after attempted removal and to cause death of the patient unless adequately treated.

Neoplasm - An abnormal tissue whose cells grow more rapidly than normal and accumulate. Closely related to a tumor.

Tumor - An abnormal growth of tissue resulting from uncontrolled multiplication of cells and serving no normal function in the body. Closely related to a neoplasm.

Malignant - Resistant to treatment; occurring in severe form, and frequently fatal.

Benign - Denoting the mild character of an illness or the nonmalignant character of a neoplasm.

Metastatic - The movement of a disease from one part of the body to another. In cancer, the appearance of neoplasms in

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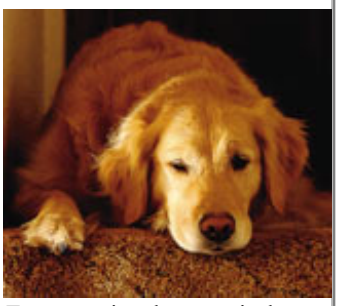
parts of the body remote from the site of the primary tumor.

Chemotherapy - Treatment of disease by means of chemical substances or drugs.

Radiation Therapy or radiotherapy - The use of high-energy radiation from x-rays, gamma rays, neutrons, protons, and other sources to kill cancer cells and shrink tumors. Radiation may come from a machine outside the body (external radiation therapy), or it may come from radioactive material placed in the body near cancer cells (internal radiation therapy).

Fibroma



Fibromas are benign tumors that originate from skin and subcutaneous connective tissue cells called fibroblasts. Fibromas are most commonly found on older female boxers, Boston terriers, Doberman pinschers, Golden retrievers and fox terriers. These tumors are typically solitary and may be more common on the limbs, flanks and groin. Fibromas may be dome-shaped or stalked, firm or soft and may contain the skin pigment melanin. Diagnosis is made by a microscopic exam. Treatment involves surgical removal, cryosurgery or close observation.

Intracutaneous Cornifying Epithelioma

Intracutaneous cornifying epitheliomas originate from the skin cells found between the hair follicles. These tumors are located on the skin of the neck, upper chest, legs and lower abdomen and sometimes secrete a toothpaste-like substance. Microscopic examination is required for an accurate diagnosis of this tumor. Treatment involves surgical removal, although chemotherapy may be effective.

Lipoma

Lipomas are growths comprised of mature fat cells or lipocytes. The lipoma is usually a subcutaneous, well-circumscribed, soft, fluctuant mass that is typically found over the chest, sternum, abdomen and the upper portion of the dog's limbs. These tumors occur most commonly in older spayed females. Lipomas can occur as a single or as multiple masses. Some lipomas are infiltrative meaning they penetrate the deeper tissues of the body. Most lipomas are found just below the skin. Diagnosis of lipomas involves examining a sample of the tumor microscopically to identify the presence of mature lipocytes.

Treatment of lipomas usually involves surgical removal. Although, depending on the tumor's size and location, many veterinarians will elect to leave these tumors alone. If surgery is considered, it is best to remove these tumor(s) while they are small.

Mast Cell Tumor

Mast cells are a normal component of the dog's immune system and are an important part of the dog's inflammatory response to tissue trauma. Mast cell tumors (MCT) can be found in many different locations in the body but are most commonly found in the skin. The cause of MCT is unknown. There does appear to be some breed predisposition toward the MCT. Boxers, Boston terriers, English bulldogs, and English bull terriers are at greater risk. MCT are typically solitary masses found in the skin of the trunk, the extremities and the head/neck. Stomach and intestinal ulcers have been reported in up to 80% of dogs with MCT. Researchers believe this is due to the high level of histamines released from the MCT. It should be noted that not all canine MCT are benign. In fact, up to 50% of these tumors can become malignant. For this reason, all MCT should be biopsied and properly identified microscopically. Treatment involves wide surgical excision (surgically removing the tumor and a wide area of normal-appearing skin around it), radiation and/or chemotherapy.

Nevus

The nevus (commonly called a mole) is a well-defined, developmental defect in the skin that can originate from any skin component or combination of components. The term "nevus" is used with a qualifier such as "epidermal" and "sebaceous gland." Proper diagnosis of the nevus requires a microscopic examination of a biopsied tissue sample. Treatment generally involves surgical removal or observation without therapy.

There are several different forms of nevi:

- Epidermal Nevus
- Sebaceous Gland Nevus
- Collagenous Nevus
- Organoid Nevus
- Vascular Nevus
- Apocrine Sweat Gland Nevus
- Hair Follicle Nevus
- Comedo Nevus

Papilloma

The canine papilloma may be caused by a virus or occur spontaneously.

Oral: The canine oral papilloma is a highly contagious tumor of viral origin that can be spread between dogs by direct or indirect contact. This tumor typically affects dogs younger than two

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years and is the most common form. Multiple lesions are seen in and around the mouth. The oral papilloma usually undergoes spontaneous regression within three months of onset and the dog is generally immune to further infection. If spontaneous regression does not occur, there are chemotherapeutic agents that can help reduce and eliminate these tumors.

Cutaneous: The cutaneous papilloma is a benign skin tumor that is of non-viral origin and is common in the older dog. These tumors are whitish-gray cauliflower shaped masses and are typically found on the head, eyelids and feet. Surgical removal of a single cutaneous papilloma is usually curative.

Perianal Adenoma also known as Hepatoid Gland Tumors
The perianal adenoma is a tumor that originates from the perianal glands that surround the anus. They can also be found in the skin of the tail, prepuce, thigh, and over the top of a dog's back. Perianal adenomas are most common in older intact male dogs and typically act benign. They are also known as hepatoid gland tumors because, at the cellular level, perianal adenomas resemble hepatocytes or liver-cells. These tumors can be solitary or multiple and are dependent on the presence of testosterone. Perianal adenomas typically regress with castration of the dog. Surgical removal may be needed if castration does not result in complete regression.

Sebaceous Gland Tumors
Canine sebaceous gland hyperplasia or adenoma originates from the cells of the sebaceous glands. The sebaceous gland produces an oily/waxy substance that lubricates the skin and hair of dogs. These tumors appear wart-like or cauliflower-like and are fairly common in dogs (especially spaniels). They can appear anywhere on the body and are usually solitary lesions; although multiple lesions can occur. Surgical removal is the treatment of choice. Local recurrence is rare, however up to 10% of dogs may develop a sebaceous gland tumor in another location.

Skin Melanoma
Melanomas originate from the melanin producing cells called melanocytes. The different pigments in a dog's skin result from melanin produced by melanocytes. Melanomas that are found in the skin are generally benign while melanomas in other parts of the body such as the oral cavity and nail bed may be highly malignant and metastatic. Melanomas are typically found on the face and trunk. A microscopic examination will reveal cells that contain brown to black granules. Surgical removal is the treatment of choice.

Transmissible Venereal Tumor
Transmissible venereal tumors originate from the monocyte/macrophage system and are spread during mating or through other close contact. These tumors are typically found on the external genitalia and the face and appear as ulcerated, solitary or multiple, friable, cauliflower-like masses. Microscopic examination of a tissue sample will confirm the identity of this tumor. Treatment of a transmissible venereal tumor involves chemotherapy, surgical removal and/or radiation therapy.

Trichoepithelioma
Trichoepitheliomas are derived from the cells of the hair follicle sheath and are most often solitary lesions. These tumors are typically found on the head, limbs and tail in dogs older than five years of age. Trichoepitheliomas are solid or cystic and appear round, elevated and well-defined. They may ulcerate and lose their hair. Accurate diagnosis requires a biopsy and microscopic examination. Surgical removal is the treatment of choice.

Summary
There are many different growths or tumors that can appear in a dog's skin. It is very important that your veterinarian examine any new growth you notice on your dog as soon as possible. Some of the above described lesions may look outwardly similar. Proper identification will require a biopsy and an examination of the sample by a trained veterinary pathologist. Early identification and treatment will help ensure a positive outcome.

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